

Test Report on Cement

TEJUS

Project	Package-10.1, Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division, 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri R Ramshankar Reddy
Sample ID	Cement (ACC cement) OPC 43 Grade
Date of Sample Tested	04.11.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	106 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	485 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	6 mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	28.00%	25 % to 35

Note:

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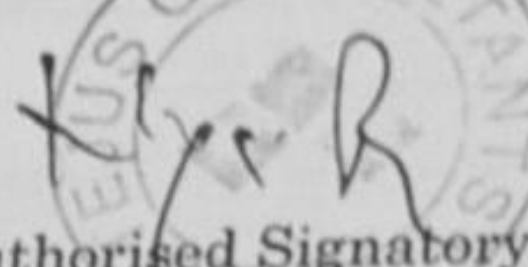


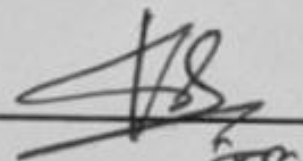
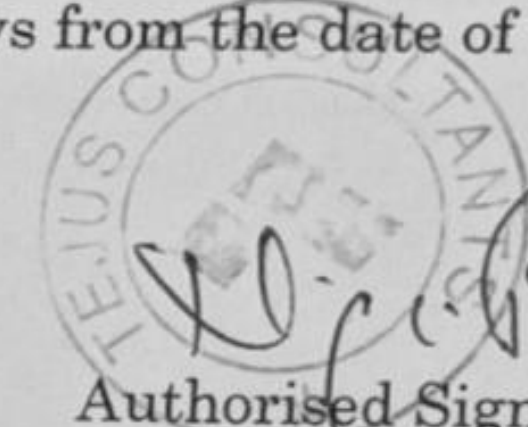
TEJUS CONSULTANTS

No. 5B, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

TEST REPORT					
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE				
Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Sri.R Ramshankar Reddy				
SPECIFIC GRAVITY AND WATER ABSORPTION					
FINE AGGREGATE (IS-2386-PART-3)					
Type of Material	Fine aggregate (M sand)	Proposed Use	PCC		
Location/Source	At Laboratory	Date of Sampling	03-11-2019		
Period of Soaking	24 hours	Date of Testing	04-11-2019		
Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.	664	638	670	
B	Weight of oven - dry sample gm.	655	630	662	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1692	1676	1696	
E	Bulk specific gravity $\frac{B}{(C + A - D)}$	2.652	2.658	2.659	2.656
G	Absorption (%) $\frac{(A - B) * 100}{B}$	1.374	1.270	1.208	1.284

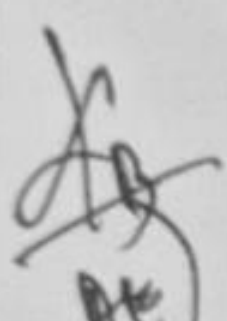
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TEST REPORT					
Clients	Bruhat Bangalore Mahanagara Palike				
Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagera 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.				
Consultants	Tejus Consultants, Bangalore				
Contractor	Sri.R Ramshankar Reddy				
SIEVE ANALYSIS					
Total Weight:	3000 gms				
Type of Material	Fine aggregate (M sand)		Proposed Use	PCC	
Sample Location	At Site	Date of Sampling		04-11-2019	
		Date of Testing		04-11-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	208	208	6.93	93.07	90 - 100
2.36 mm	312	520	17.33	82.67	75 - 100
1.18 mm	416	936	31.20	68.80	55 - 90
0.600 mm	486	1422	47.40	52.60	35 - 59
0.300 mm	752	2174	72.47	27.53	8-30
0.150 mm	624	2798	93.27	6.73	0 - 10
Pan	202	3000			-
Remarks : ☒ Satisfactory / Not Satisfactory					
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TEST REPORT

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Clients	Bruhath Bangalore Mahanagara Palike				
Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Sri.R Ramshankar Reddy				
Total Weight in gm:	3000				
SIEVE ANALYSIS					
Type of Material	40 mm down size			Proposed Use	PCC
Sample Location	At Site			Date of Sampling	04.11.2019
				Date of Testing	04.11.2019
IS Sieve Size	Weight Retained in gm	Cum. Weight Retained in gm	Cumulative Weight Retained in %	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA-2007) % of Passing For Graded Aggregate of Nominal Size
80.00mm	0	0	0.00	100.00	100
63.00mm	0	0	0.00	100.00	-
40.00mm	84	84	2.80	97.20	95-100
20.00mm	1422	1506	50.20	49.80	30-70
10.00mm	978	2484	82.80	17.20	10-35
4.75mm	428	2912	97.07	2.93	0-5
Pan	88	3000	100.00	0.00	
Remarks :			Satisfactory / Not Satisfactory		
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TEJUS CONSULTANTS

No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

Job No.: CECTC/RR/QC/2020-21

Date: 05.11.2019

TEST RESULTS OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client : Bruhath Bangalore Mahanagara Palike.
Contractor : Sri R Ramshankar Reddy, Contractor, Bangalore.
Name of Work : Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Sample Identification : 10mm & 12mm Fe 500 TMT Bars
Technical Reference : IS 1786:2008, IS 1608:2005, IS 1599:1985 (Reaffirmed 2006)
Date of test: : 05.11.2019

Sl.No	Nominal size (dia in mm)	Mass per metre (kg/metre)	TENSILE STRENGTH		
			0.20 % proof stress/ yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation, percent on gauge length
1	10	0.618	530	582	17
2	12	0.896	547	596	18

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For Civil Experts
Sushantha ap.
Authorised Signature



Test Report on Cement

Project	Package-10.1. Construction of anganawadi building at hoglu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division. 4.Improvements to Roads and Drains at Shivaramakanthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri.R Ramshankar Reddy
Sample ID	Cement (AOC Cement) OPC 43 Grade
Date of Sample Tested	07.11.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12268-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	106 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	472 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	4 mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	28.00%	25 % to 35

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TEJUS CONSULTANTS

No.58, 6th main, 6th Cross, 1st Stage K-H Colony, Basaveshwara Nagar, Bangalore - 560075. D: +91 9845257532 tejusconsultants@gmail.com

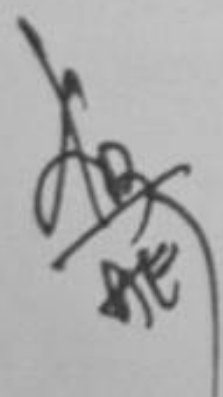
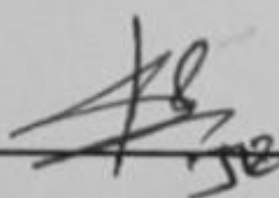
TEST REPORT	
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

SPECIFIC GRAVITY AND WATER ABSORPTION
FINE AGGREGATE (IS-2386-PART-3)

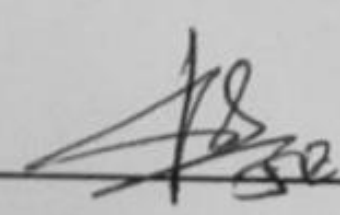
FINE AGGREGATE (IS-2386-PART-3)					
Type of Material		Fine aggregate (M sand)		Proposed Use	
Location/Source		At Laboratory		Date of Sampling	
Period of Soaking		24 hours		Date of Testing	
Sl. No.		Test Property		TRIAL - 1	
A		Weight of sturated surface dry sample gm.		650	
B		Weight of oven - dry sample gm.		642	
C		Weight of Pycnometer Filled with water gm		1275	
D		Weight of Pycnometer + sample + water gm		1684	
E		Bulk specific gravity $\frac{B}{(C + A - D)}$		2.664	
G		Absorption (%) $\frac{(A - B) * 100}{B}$		1.246	

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TEST REPORT					
Clients	Bruhat Bangalore Mahanagara Palike				
Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.				
Consultants	Tejus Consultants, Bangalore				
Contractor	Sri.R Ramshankar Reddy				
SIEVE ANALYSIS					
Total Weight:	3000 gms				
Type of Material	Fine aggregate M sand)		Proposed Use	concrete	
Sample Location	At Site/Plant		Date of Sampling	07.11.2019	
			Date of Testing	07.11.2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	212	212	7.07	92.93	90 - 100
2.36 mm	308	520	17.33	82.67	75 - 100
1.18 mm	426	946	31.53	68.47	55 - 90
0.600 mm	480	1426	47.53	52.47	35 -59
0.300 mm	736	2162	72.07	27.93	8-30
0.150 mm	630	2792	93.07	6.93	0 - 10
Pan	208	3000			-
Remarks : ✓ Satisfactory / Not Satisfactory					
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TEJUS CONSULTANTS

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TEST REPORT

TEJUS

Clients	Bruhat Bangalore Mahanagara Palike
Project	Package-10.1. Construction of anganawadi building at kogilu in ward No.05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy
Total Weight:	10000 gms

SIEVE ANALYSIS

Total Weight		Sieve Analysis			
Type of Material	20 mm down size		Proposed Use	Concrete	
Sample Location	At site		Date of Sampling	06.11.2019	
			Date of Testing	07-11-2019	
IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
				100	100
40.00 mm	0	0	0	97.28	95 - 100
20.00 mm	272	272	2.72	48.92	25 - 55
10.00 mm	4836	5108	51.08	6.64	0 - 10
4.75 mm	4228	9336	93.36		
Pan	664	10000			

Satisfactory / Not Satisfactory

Remarks :

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Clients	Bruhat Bangalore Mahanagara Palike
Project	Package-10.1. Construction of anganawadi building at Kogilu byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Consultants	TEJUS CONSULTANTS
Contractor	Sri.R Ramshankar Reddy
Total Weight:	10000 gms

SIEVE ANALYSIS

SIEVE ANALYSIS					
Type of Material	12.5 mm down size		Proposed Use	CONCRETE	
Sample Location	At Site/Plant		Date of Sampling	06.11.2019	
			Date of Testing	07.11.2019	
IS Sieve Size (in mm)	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
20.0	0	0	0	100	100
12.5	534	534	5.34	94.66	90-100
10.0	4452	4986	49.86	50.14	40-85
4.75	4550	9536	95.36	4.64	0-10
Pan	464	10000			

Remarks :

✓ Satisfactory / Not Satisfactory

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Package-10.1. Construction of Anganawadi building at Kogilu in Ward No.05 Byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division, 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthangara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri.R Ramshankar Reddy
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm ²	KN	N/mm ²	N/mm ²
1	07.11.2019	14.11.2019	7 days	8.125	22500	310	13.78	13.78
2	07.11.2019	14.11.2019	7 days	8.136	22500	312	13.87	
3	07.11.2019	14.11.2019	7 days	8.148	22500	308	13.69	

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Sri.R Ramshankar Reddy
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

SL.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm ²	KN	N/mm ²	N/mm ²
1	07.11.2019	05-12-2019	28 days	8.128	22500	486	21.60	21.60
2	07.11.2019	05-12-2019	28 days	8.142	22500	490	21.78	
3	07.11.2019	05-12-2019	28 days	8.150	22500	482	21.42	

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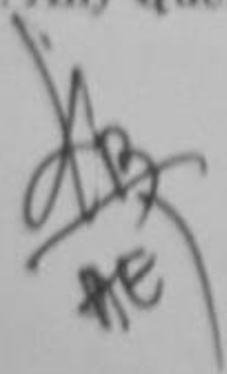
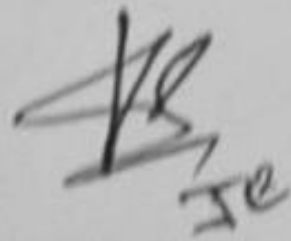
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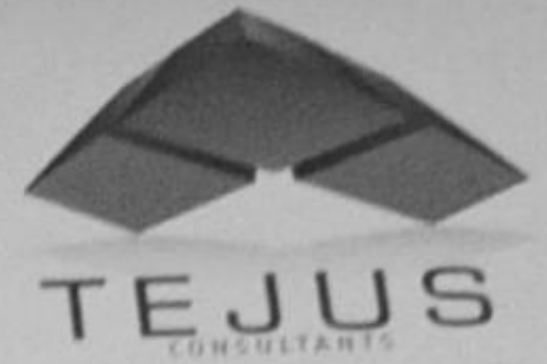
GRADATION FOR GSB (As per MORT&H 400-1, Grading-II)				
Name of Work	1	Package: 10.1. Construction of anganawadi building at kogila in ward no.05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.06 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division, 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No.05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No.05 Byatarayanapura		
Client	1	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	1	M/s Tejus Consultants		
Contractor	1	Sri.R Ramshankar Reddy		
Date of Testing	1	02-12-19		
Type of Mix	1	GSB		
Sample I/D	1	GSB1		
Sample Location:	6th A Cross from Temple to end	Date of Sampling:	02-12-19	
		Date of testing:	02-12-19	
Type of material & Purpose:	GSB	Oven Dry Wt.(gms):	10000.0	

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
75	0	0	0.00	100.00	-
53	0	0	0.00	100.00	100.00
26.5	2242	2242	22.42	77.58	70-100
9.5	2542	4784	47.84	52.16	50-80
4.75	784	5568	55.68	44.32	40-65
2.36	1212	6780	67.80	32.20	30-50
0.425	1972	8752	87.52	12.48	10-15
0.075	822	9574	95.74	4.26	<5
Pan	426.0				
Total	10000.0				

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Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	Sri.R Ramshankar Reddy		
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))			
Date of Testing	09-12-19		
Layer no. or level	GSB layer		
Depth of hole	200mm		
Chainages	6th A Cross from Temple to end'@20	6th A Cross from Temple to end'@50	6th A Cross from Temple to end'@80
Field density:	1	2	2
Wt. of wet material from hole (Ww) gms.	5984	5976	5992
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10580	10572	10570
Wt. of sand in hole+ cone (w3) gms.	4420	4428	4430
Wt. of cone gms.	1080	1080	1080
Wt. of sand gms.	3340	3348	3350
Bulk density of sand (ys)gm/cc	1.32	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (yb)=(Ww/w4*(ys))gm/cc	2.36	2.36	2.36
Moisture meter reading(moisture content)	6.50	6.40	6.40
Result			
FDD(Wt.of the dry material)=(100yb/100+mc)gm/cc	2.22	2.21	2.22
MDD	2.25	2.25	2.25
OMC	6.30%	6.30%	6.30%
% compaction obtained	98.69	98.42	98.62
% compaction required	98%	98%	98%

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

Authorised Signatory

Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.					
Client	Bruhat Bengaluru Mahanagara Palike					
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore					
Contractor	Sri.R Ramshankar Reddy					
AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)						
Proposed Use	WMM	Date of Sampling	16-12-2019			
Sample Location	At Plant	Date of Testing	16-12-2019			
Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	356.00	368.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	274.00	282.00	262.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	82.00	86.00	80.00	
4	Aggregate Impact Value (%)	$(Wc/Wa) \times 100$	23.03	23.37	23.39	
5	Average Aggregate impact value	(%)	23.27			Max - 30 %
Remarks :		✓ Satisfactory / Not Satisfactory				




Consultant's Representative

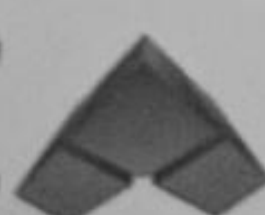


Name of Work	:	Package-10.1, Construction of anganawadi building at koghlu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4 Improvements to Roads and Drains at Shivramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.			
Client	:	Bruhat Bengaluru Mahanagara Palike			
Consultant	:	TEJUS CONSULTANTS, Basaveshwar Nagar Bangalore			
Contractor	:	Sri R Ramshankar Reddy			
Date of Testing	:	16-12-2019			
Type of Mix	:	WMM			
Sample I/D	:	WMM 1			
GRADATION FOR WMM (As per MORT&H 400-11)					
Sample Location:	6th A Cross Phase 1	Date of Sampling:	15-12-2019		
		Date of testing:	16-12-2019		
Type of material & Purpose:	WMM	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	374	374	3.74	96.26	95-100
22.4	1796	2170	21.70	78.30	60-80
11.2	2250	4420	44.20	55.80	40-60
4.75	1994.0	6414	64.14	35.86	25-40
2.36	1398.0	7812	78.12	21.88	15-30
0.6	766.0	8578	85.78	14.22	8.0-22.0
0.075	882.0	9460	94.60	5.40	0-8
Pan	540.0	10000			
Total	10000.0				





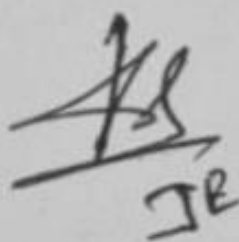
Consultant's Representative



Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.				
Client	Bruhat Bengaluru Mahanagara Palike				
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Sri.R Ramshankar Reddy				
FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)					
Type of Material	WMM			Proposed Use	WMM
Sample Location	At plant			Date of Sampling	17-12-2019
				Date of Testing	17-12-2019
Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	534	86	522	74
16.0	12.5	1136	120	1002	114
12.5	10.0	732	60	724	54
10.0	6.3	622	56	564	40
Total		3024	322	2812	282

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.65
Elongation Index(%):	10.03
Combined FI+EL (%)	20.68


Consultant's Representative

Name of Work:	1	Partage-15.7 Construction of underground building at height 100m and 155m in Ward No. 155 in Ward No. 155 and 157 construction division. 2 Improvements of roads and drains at Ward No. 155 in Ward No. 155 and 157 construction division. 3 Improvements of roads and drains at Ward No. 155 in Ward No. 155 and 157 construction division. 4 Improvements of roads and drains at Ward No. 155 in Ward No. 155 and 157 construction division. 5 Improvements of roads and drains at Ward No. 155 in Ward No. 155 and 157 construction division.
Client:	1	Krishna Nagaraj Kumar Nagaraj
Consultant:	1	TEJUS CONSULTANTS, Basaveshwara Nagar Bangalore
Contractor:	1	Dr. R. Ramakrishna Reddy
Date of Testing:	1	17-12-2019
Type of Mix:	1	W/M
Sample I/D:	1	W/M

GRADATION FOR WMM					
(As per MORT&H 400-11)					
Sample Location:	6th A Cross Phase 1	Date of Sampling:	16-12-2019		
		Date of testing:	17-12-2019		
Type of material & Purpose:	W/M	Oven Dry Wt.(gms):	10000.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
53	0	0	0.00	100.00	100.00
45	374	372	3.72	96.28	95-100
22.4	1796	2162	21.62	78.38	60-80
11.2	2250	4412	44.12	55.88	40-60
4.75	1994.0	6445	64.45	35.55	25-40
2.36	1398.0	7820	78.20	21.80	15-30
0.6	766.0	8586	85.86	14.14	8.0-22.0
0.075	882.0	9468	94.68	5.32	0-8
Pan	532.0	10000			
Total	10000.0				

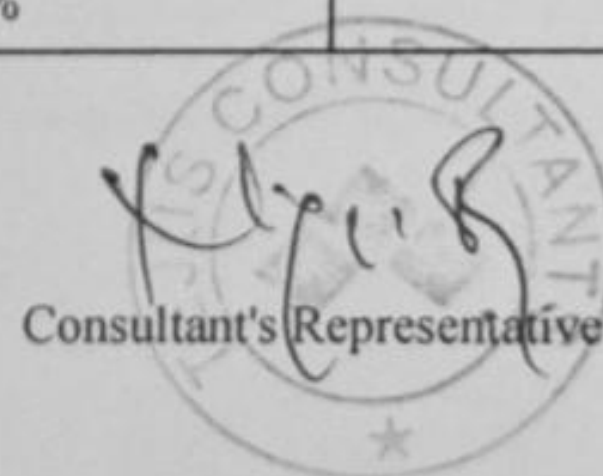
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Consultant's Representative

Project	Package-10 I. Construction of anganawadi building at kogilu in ward no.05 byatarayanapura sub division. 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division. 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.	
Client	Bruhat Bengaluru Mahanagara Palike	
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	Sri R Ramshankar Reddy	
Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28))		
	Date:	19-12-2019
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainages	6th A cross Phase-1'@50	6th A cross Phase-1'@100
Wt. of wet material from hole (Ww) gms.	5982	5978
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10592	10594
Wt. of sand in hole+ cone (w3) gms.	4408	4406
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3328	3326
Bulk density of sand (γ_s)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γ_b)= $(Ww/w4*(\gamma_s))$ gm/cc	2.37	2.37
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)= $(100\gamma_b/100+mc)$ gm/cc	2.23	2.23
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.24	98.41
% compaction required	98%	98%





Consultant's Representative